

REMARKS

By the present amendment, claims 15, 23, 26 and 27 have been amended to eliminate §112 issues, claim 15 has also been amended to specify that the inverse topography is sized to provide embossing depths of less than 1000 microns, claim 49 has been placed in an independent format¹, claims 50-83 have been added, and non-elected claims 1-14 and 28-48 have been canceled. Upon entry of this amendment, claims 15-27 and 49-83 will be pending in the application.

Election/Restriction

The election of claims 15-27 and 49, drawn to an apparatus for continuously forming thermoplastic products, is hereby affirmed, with traverse. It is respectfully submitted that added claims 50-83, also drawn to an apparatus for continuously forming thermoplastic products, should also be examined in the present application.

Claim Rejections - 35 USC § 102 / § 103

Claims 15-27 have been rejected as being anticipated by, or obvious over, U.S. Patent No. 4,844,766. Held discloses a double band press for the fabrication of thermoplastic panels. The patent states that “[i]f the press bands have a structured surface, for instance, knobs, ornaments, corrugations, or irregular structures, etc., then the plastics web 5 is imparted with an image on this pattern embossed on its surface.”²

Thus, Held teaches the possible embossing of course structures, such as knobs or ornaments, onto thermoplastic panels. In contrast, the present invention is concerned with continuously forming thermoplastic products having precision microstructured surfaces. As explained in the specification, “precision microstructured” refers to embossing depths of less than 1000 microns whereby the inverse topography of the tool surface would have corresponding precision features.³ The “structured surface” of the Held bands (which produces knobs, ornaments, and corrugations) can not provide such precision. Furthermore, the applied art provides absolutely no suggestion to form such microstructures with the Held panel-making press.

Accordingly, it is respectfully submitted that Held does not show or suggest using a double band press to continuously form thermoplastic products having precision

1. The indicated allowability of claim 49 is noted with appreciation and this claim is now believed to be in a condition for allowance.

2. Held, column 5, lines 51-55.
3. Paragraph 0030 (pages 11-12).

microstructured surfaces. Claims 15-27 and added claims 50-75 specify "a tool surface having inverse topography of the precision microstructured surface to be formed." This structural limitation (i.e., this inverse topography) is not found in the Held press and thus patentably distinguishes the claimed apparatus from this prior art apparatus.⁴ Moreover, claims 15-27 now specifically set forth, and claims 50-75 set forth, that the inverse topography is sized to provide embossing depths of less than 1000 microns.

Regarding added claims 76 - 83, they set forth tracking rollers and/or steering rollers to facilitate proper alignment of the overlay as it moves through the reaction zone. It is respectfully submitted that Held does not show or suggest such a feature.

Conclusion

This application is now believed to be in condition for allowance and an early indication to that effect is earnestly solicited.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By Cynthia S. Murphy
Cynthia S. Murphy, Reg. No. 33,430

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper or thing referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: October 5, 2004

Claudia Bader
Claudia Bader

R:\CSM\AVERY\P2914\P2914USA.R01.wpd

4. The Examiner notes in the Office Action that "the manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself" and that "a recitation with respect to the manner in which a claimed apparatus is intended to be used does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations." However, a tool surface, and the inverse topography thereon, is a structural part of an apparatus.